DEMOUNTING WITH (DE)MOUNT HEAD AND IN-CONTROL HOOK

STEP 19 REPLACE THE PRESS BLOCK FROM HELPER ARM (1) WITH THE IN-CONTROL HOOK.



- **STEP 20** RAISE THE VERTICAL TOOL SELECTOR UNTIL THE (DE)MOUNT HEAD ARM CAN MOVE FREELY OVER THE TIRE. MOVE THE ARM TO ITS LOCKING POSITION.
- **STEP 21** LOWER THE VERTICAL TOOL SELECTOR AND POSITION THE (DE)MOUNT HEAD ON THE EDGE OF THE RIM. ENSURE TAT THE (DE)MOUNT HEAD IS PROPERLY ALIGNED, ADJUST IF NEEDED.
- **STEP 22** POSITION THE IN-CONTROL HOOK ONTO THE (DE)MOUNT HEAD.



STEP 23 DEPENDING ON THE TIRE COMPLEXITY, USE THE HELPER ARM (2) AND ITS PRESS BLOCK TO GENTLY PRESS THE TIRE BEAD ON THE OPPOSITE SIDE. THIS TO MAKE SURE THAT THE BEAD IS IN THE DROP CENTER TO ENSURE SUFFICIENT SPACE WHILE DEMOUNTING WITH THE IN-CONTROL HOOK AND (DE)MOUNT HEAD. ELUBE TIRE SPRAY PLAYS A CRUCIAL ROLE DURING MOUNTING AND DEMOUNTING.



STEP 24 LOWER THE HOOK, BY OPERATING THE PNEUMATIC CYLINDER, UNTIL IT GRABS THE TIRE BEAD. DURING THE PROCESS (BOTH UPWARDS AND DOWNWARDS) IT'S CRUCIAL TO GUIDE THE HOOK BY HOLDING THE GRIP.



- **STEP 25** USE THE HOOK TO PULL THE BEAD OVER THE (DE)MOUNT HEAD.
- **STEP 26** NOW HAVE THE CENTER POST TURN CLOCKWISE TO REMOVE THE UPPER BEAD FROM THE RIM WHILE STILL HOLDING THE HOOK.
- **STEP 27** RAISE THE VERTICAL TOOL SELECTOR UNTIL THE (DE)MOUNT HEAD ARM CAN MOVE FREELY OVER THE TIRE. MOVE THE ARM TO ITS STARTING POSITION. MOVE HELPER ARMS (1+2) SIDEWAYS.
- **STEP 28** LIFT THE TIRE ON THE RIGHT SIDE AS FAR AS POSSIBLE.
- **STEP 29** LOWER THE VERTICAL TOOL SELECTOR UNTIL THE BOTTOM BEAD PRESS ARM WITH DISK CAN MOVE FREELY UNDERNEATH THE TIRE. MOVE THE ARM TO ITS LOCKING POSITION.
- **STEP 30** MOVE THE VERTICAL TOOL SELECTOR UPWARDS BY PRESSING THE "UP" BUTTON. WHEN REACHING THE RIM EDGE, PRESS THE LOWER BEAD BREAKING BUTTON TO PUSH THE BEAD OVER THE RIM EDGE. KEEP 0,25 INCH CLEARANCE IN BETWEEN DISK AND RIM EDGE. MAKE SURE THE TMPS SENSOR ISN'T DAMAGED DURING THE PROCESS.





STEP 31 NOW HAVE THE CENTER POST TURN CLOCKWISE TO COMPLETELY REMOVE THE TIRE FROM THE RIM.



STEP 32 PRESS THE "DOWN" BUTTON UNTIL THE TURNTABLE IS BACK TO ITS ORIGINAL POSITION.



- **STEP 33** AS SOON AS THERE'S ENOUGH CLEARANCE UNLOCK THE BEAD PRESS ARM WITH DISK. SWING IT BACK TO ITS STARTING POSITION.
- **STEP 34** CHECK THE RIM FOR ANY IMPERFECTIONS OR DAMAGE BEFORE FITTING A NEW TIRE. ALWAYS CHECK/REPLACE THE VALVE AND CHECK/PROGRAM/REPLACE THE TPMS IF NEEDED.

7.3.3 – Mounting tire

- **STEP 1** LUBRICATE THE NEW TIRE WITH ELUBE TIRE SPRAY.
- **STEP 2** CHECK FOR DIRECTIONAL MARKS OR SIDE MARKS ON THE TIRE. POSITION THE TIRE ON THE RIM.
- **STEP 3** RAISE THE VERTICAL TOOL SELECTOR UNTIL THE (DE)MOUNT HEAD ARM CAN MOVE FREELY OVER THE RIM. MOVE THE ARM TO ITS LOCKING POSITION.
- **STEP 4** LOWER THE VERTICAL TOOL SELECTOR AND POSITION THE (DE)MOUNT HEAD. ENSURE THAT THE (DE)MOUNT HEAD IS PROPERLY ALIGNED, KEEP 0,13 INCH CLEARANCE. ADJUST IF NEEDED.
- **STEP 5** NOW HAVE THE CENTER POST TURN CLOCKWISE TO FIT THE LOWER BEAD ON THE RIM.
- **STEP 6** POSITION EDGE OF TIRE BEAD ON TOP OF THE MOUNTING LIP OF THE (DE)MOUNT HEAD. THE MOUNTING LIP IS ON THE LEFT SIDE OF THE LIP.
- **STEP 7** PUSH EDGE OF TIRE BEAD UNDER THE DEMOUNTING LIP OF THE HEAD, WHILE KEEPING THE OTHER EDGE OF TIRE BEAD ABOVE THE MOUNTING LIP.
- **STEP 8** TWIST TIRE CLOCKWISE BY HAND TO LOCK THE TIRE INTO THE MOUNTING POSITION. TURN CENTER POST CLOCKWISE.
- **STEP 9** NOW HAVE THE CENTER POST TURN CLOCKWISE TO FIT THE UPPER BEAD ON THE RIM.
- **STEP 10** WHEN NECESSARY USE HELPER ARM (2) WITH PRESS BLOCK AND/OR IN-CONTROL BEAD PRESS ROLLER.
- **STEP 11** STORE THE HELPER ARMS IN THEIR HOME POSITION, LOCK THEM BY USING AIR PRESSURE. AVOID EXCESSIVE PRESSURE!



HELPER ARM 1 AT SIDE



HELPER ARM 2 AT REAR

STEP 10 INFLATE TIRE WITH AIR TO THE PRESSURE ADVISED BY THE MANUFACTURER. AN AUTOMATIC INFLATOR (8) IS AVAILABLE. PLEASE READ THE MANUAL BEFORE USING THE INFLATOR.



KEEP HANDS AND BODY AS FAR AWAY AS POSSIBLE FROM TIRE DURING INFLATION. TIRES ARE TO BE INFLATED WITH UTMOST CAUTION.



STEP 2 PRESS AN

PRESS AND HOLD THE RIGHT FOOT PEDAL



STEP 3 TURN ARMS OF THE QUICK NUT UP



- **STEP 4** UNSCREW THE QUICK NUT AND REMOVE PLASTIC CONE COVER HOLDING THE DUAL METAL CONES.
- **STEP 5** RELEASE THE RIGHT FOOT PEDAL TO LOWER THE CENTER POST SPINDLE.
- **STEP 6** CAREFULLY REMOVE THE WHEEL FROM THE CENTER POST.
- **STEP 7** THE WHEEL IS NOW READY FOR BALANCING.

ATTENTION:

ECUBE BENEFITS FROM MULTIPLE STEPPER MOTORS. IN CASE OF A TORQUE OVERLOAD THE MOTOR THAT ENSURES THE ROTATION OF THE TURNTABLE WILL STOP. BY SWITCHING THE MACHINE OFF/ON IT WILL BE OPERATIONAL AGAIN. MAKE SURE TO USE SUFFICIENT ELUBE DURING THE (DE)MOUNTING PROCESS.

SMALL INTERVALS DURING THE BEAD BREAKING PROCESS HELP TO AVOID TORQUE OVERLOAD.

ECUBE COMES EQUIPPED WITH INSTRUCTIONAL VIDEOS ON HOW TO CHANGE A TIRE, BALANCE A WHEEL, AND TROUBLESHOOT ANY PROBLEM YOU MAY ENCOUNTER ALONG THE WAY.

7.4 – Touchscreen

Your ecube touchscreen offers a variety of interesting features. Use pinch gestures to zoom in or out (as your fingers move apart, the screen zooms in).

7.4.1 – Camera

The camera tab allows you to monitor the bead breaking process of the lower bead. Remember that you can use pinch gestures to zoom in and zoom out.



7.4.2 – Power

The power tab shows you the power system. it allows you to check the ac/dc and dc/dc charging performance. you also have the possibility to switch the inverter on/off. ('off' is recommended when you are not using your ecube for a longer time)



7.4.3 – Page

The html based page tab brings you to the ecube-equipment website as long as connected with the internet (through cell phone or by entering an approved network environment).



7.4.4 – Service

The service tab brings you to the page with manuals and 'how to' videos. It also shows the TeamViewer tab for remote access/support by authorized ecube staff and only after your approval.



The test menu tab helps to quickly identify a possible connection problem between components.

The connect tab helps you to establish a WiFi connection.

	RA P		PAGE	BACK
CURRE	NTLY CONNECTED	TO: TM		
SCANN TM TM SC SGHZ	ED NETWORKS SHZ		1	
NETWOR	KNAME		ASENORD	
		REFRESH	DELETE SAV	/ED

The login tab is available to authorized ecube service technicians only.



7.5 - Miscellaneous

Emergency stop button

When a dangerous situation occurs which requires immediate action, press the Emergency stop button. This knob stops the tire changer completely and ensures no electricity and moving parts will be active anymore.

Helper arm positioning

If you do not work for a long time with the Ecube, we suggest to place the helper arms in their holders. This way, no accidents or damage can take place. When driving, ALWAYS place the helper arms in their holders to prevent them from moving around in the vehicle.



Safety switch protection

Within the machine, multiple safety switches are located in order to prevent accidents and lethal damage. When a tire is hitting the plate of the vertical axle, the machine will likely shut off out of protection.



Quick nut usage

Place the quick nut above the black spindel. By pushing the metal 'handles' to the opposite direction, the quick nut expands and allows you to move it to the bottom of the spindel. Release the handles at the end in order to return the screw thread. Tighten extra if required.



8 – Ecube Wheel Balancer guide



8.1 – Wheel Balancer Layout





Picture may show a slight difference in your own model

- 1 = Balancing indication inner rim flange
- 2 = Display inner rim flange
- 3 = Position balancing weight
- 4 = Balancing indication outer rim flange
- 5 = Display outer rim flange
- 6 = Dimension rim to machine adjustment
- 7 = Width rim adjustment
- 8 = Diameter rim adjustment
- 9 = Monitor battery
- 10 = Main power switches
- 11 = Power connection battery > balancer
- 12 = Battery box
- 13 = Measuring arm

8.2 – Wheel Balancer control panel definitions

<mode>:</mode>	To select balancing type: Dynamic-Static-Alu.
<set>:</set>	Confirm selection
<oper>:</oper>	To select Operator 1 or Operator 2.
<fine>:</fine>	To select reading scale.
<func>:</func>	To select specific functions.
<start-stop>:</start-stop>	Starts-stops wheel spinning.
6 <distance +="" -="">:</distance>	Set internal side measure.
7 <width +="" -="">:</width>	Set width rim.
8 <diameter +="" -=""></diameter>	Set diameter rim.

LED INDICATORS

1-4:	Indicates location of weight required.
2-5:	Indicates amount of weight required.
3:	Indicates the application point of weights.

8.3 – Wheel Balancer specifications

Ecube Balancer generation 4 Specifications			
Dimensions	930x456x520 mm / 36.61x 17.95x 20.47 inches (LxWxH	1)	
Weight	Gross: 57 kg / 125,7 lb, Net 45 kg / 99.21 lb		
Power	60W		
Speed balancing	98 RPM		
Measuring time	4-15 seconds		
Precision	± 1 grs (± 1/28 ounce)		
Rim diameter dimensions	From 8" to 26"		
Wheel diameter with cover	Max. 34"		
Rim width with cover	Max. 16"		
Wheel weight Max. 70 kg / 155 Lbs			

8.3.1 – Wheel Balancer dimensions



8.4 - Calibrating the wheel balancer

Indications for the need of calibration:

-Constant low or high weight readings

-Point of unbalance constantly wrong

-2+ spins required in order to balance the wheel correctly

STEP 1	Turn on the wheel balancer
STEP 2	Press <set> when <sof> appears on the display</sof></set>
STEP 3	Select mode CAL USR
STEP 4	Let the wheel balancer spin until it stops (C0 on screen)
STEP 5	After the first spin is done, place any steel wheel on the flange (C1 on screen)



STEP 6	ATTENTION! Do not forget to tighten the wheel with the cone and quick nut
STEP 7	Let the wheel balancer spin

STEP 8 Start C2 (calibration 2) with the calibration weight on the flange installed



STEP 9	Let the wheel balancer spin
STEP 10	Calibration is finished
STEP 11	Press <mode esc=""> in order to balance normal again</mode>

8.5 - Balancing a wheel

- **STEP 1** Position the wheel, install cone and tighten quick nut
- **STEP 2** Place your uni-plate if preferred
- **STEP 3** Move the measuring arm to the edge of the rim to measure internal rim data and wait for the "BEEP"



STEP 4

Move the measuring arm to the inside of the rim to measure external rim data and wait for the "BEEP"



STEP 5 Press <START> in order to start a measurement run

STEP 6 If GOOD does not appears on screen, unbalance will be indicated on the screen

STEP 7 Internal unbalance: When all LEDs are on, the wheel is in the correct position to apply weights



STEP 8

External unbalance: When all LEDs are on, the wheel is in the correct position to apply weights



Place the weight on the measuring arm



STEP 10	Turn the wheel to the position in order to have both screens balanced
STEP 11	Move the measuring arm until = = = appears on the screen
STEP 12	Apply the weight and repeat for the opposite weight if needed

8.8 – Safety precautions

- As this unit runs at a speed below 100rpm, a safety cover is not due CE regulations.
- Ecube International B.V. shall not be responsible for any inconvenience, breakdown, accidents caused directly or indirectly by unauthorized service. Service by unauthorized technicians will void warranty.
- Minimize vibrations during wheel balancing process
- Keep safe distance from wheel balancer when it is spinning

8.9 – Errors recognized by the computer

ERR 1: Shaft does not rotate	ERR 16: Calibration memory error
ERR 2: Rotation Direction is wrong	ERR 17: Rod in uncorrected position
ERR 3: Rotation speed is not ready	ERR 18: Excessive weight detected
ERR 4: Rotation speed is wrong (too low or too high)	ERR 19: Reserved
ERR 5: Position Sensor or Position Disk failure	ERR 20: Excessive Deceleration
ERR 6: Safety cover is open	ERR 21: Error in inputting data
ERR 7: Measuring cycle was interrupted	ERR 22: Brake error
ERR 8: Calibration weight was not inserted.	ERR 23: Reserved
ERR 9: Activation code not correct	ERR 24: Insufficient air pressure (PL version)
ERR 10: Overflow in calculations	ERR 25: Reserved
ERR 11: Serial number is wrong	ERR 26: Piezo sensor error
ERR 12: Serial number not inserted	ERR 27: Wheel is not securely tightened on the
ERR 13: Reserved	shaft
ERR 14: Incorrect password	ERR 28: Laser error
ERR 15: E ² prom error	ERR 29: Reserved

9 – LIDA Compressor Belt type

Please check the Air Compressor manual in your manual set for additional information.

Daily Maintenance

- Monitor your battery system for max performance from your battery pack
- Switch off the machine when not in use
- Clean surface area's for smooth constant processing

Weekly Maintenance

- Drain water from the tank
- Check water filter and oil lubricator
- Tolerance on mounting head check
- Tighten bolds and nuts if required
- Inspect wear & tear parts like (de)mount head and rollers

Monthly Maintenance

- Lubricate the horizontal and vertical spindles with a grease brush
- Thorough cleaning surface

General Maintenance

- Replace/renew all wear and tear parts like mounting head, bead press roller, tire lever protection and turntable boot when necessary.

11 – Technician owner information

Mounting	Trained	Declined
Positioning mounting head		
Mount lower beat		
Mount upper beat with helper arm		
Inflate tire		
Additional tool usage		
Third roll usage (Optional)		
In control helper arm (Optional)		
Maintenance	Trained	Declined
Separate checklist chapter 10		
By signing this paper, the technician is certified to use	the Generation 4 Ecube	
Trainer Signature	Trainee Signature	
Date signature	Date Signature	